

FCC representative,

My name is Brett Peelen. I am a farmer and I work for Ag Partners LLC in Northwest Iowa, where I am a Precision Ag Specialist. I use GPS every day in my career and every time we are in the field on the farm. At Ag Partners I sell and service GPS equipment for farmers. I sell GPS systems from Ag Leader and Trimble to help farmers save money, save time, and save fuel. GPS gives my customers and my company the ability to apply crop inputs (chemicals, fertilizer, and plant seed) at the appropriate rates with minimum waste. GPS application equipment reduces over application of inputs by shutting off equipment when it overlaps and by applying products at the correct rates according to soil tests and crop needs. GPS steering helps reduce fuel usage and product over application by optimizing passes to eliminate overlap and skips at the outside edges of each pass. GPS steering and controls also make running equipment much safer because applicators can keep a closer eye on what they are doing and if the machine is working properly when they do not have to worry about keeping the machine on the right row and changing rates manually. Our company machines also utilize GPS to apply fertilizer and chemicals for our customers across tens of thousands of acres. With high accuracy GPS my customers now have the ability to apply fertilizer in a below ground strip in the fall (strip till) and come back and plant within one inch of that strip the next spring; allowing them to put the fertilizer only where it is needed by the crop.

On my own farm we have been able to reduce the amount of fertilizer we use by using variable rate GPS application and GPS soil sampling to find out where the fertilizer needs to be and how much in each 2.5 acre grid across the field. By adding GPS to our combine we have been able to map our yields and use this as a check and balance system to see if what we are doing is actually increasing yield and crop quality. The yield monitor also helps us record data from trials that we run on our farm. We run trials for new varieties, new chemicals, new fungicides, and management practices. The yield monitor then shows us what works and what does not before we take the new operation or product to full scale on our farm. This allows us to do our own on farm research in our own fields. GPS also runs our sprayer and our planter. On both the sprayer and planter we have section control that allows the machine to shut down sections as we overlap on end rows or point rows of a field. A good example of this would be our 3 acre field surrounded by a creek on 2 sides and a road on 2 sides. Without shutoffs we used to have to mix up 5 acres of chemical to spray 3 acres because of all the overlap when spraying the irregular edges and rows of this field. We now can spray this field and only need chemical for 3.1-3.2 acres. This then applies to all of our ground. We figure that we save \$1500 or more each year in chemical savings by having the GPS system to prevent overlap. At the same time we are reducing the amount of chemicals that we have to use and the amount of fuel. On the planter this reduces the amount of seed we need and the amount of fuel we use. My customers also see these same results or higher on their own farms.

Without GPS we would all have to go back to spraying by counting rows or using foam marking systems. When using either of these methods there are a lot of errors that can cause chemical over application and overlap. It is very easy to lose count when counting rows and get lost. Any wind can cause foam to not hit the ground in the right spot and heat can cause the foam to dissipate before you get back to the other end of the field. When this happens an applicator is forced to move over and

overlap to make sure they are not leaving gaps where weeds will grow or plants will have no fertilizer. This leads to over application of products and can cause an applicator to run out of product and have to load extra product to cover the whole field. Losing GPS would cause chemical usage, fertilizer usage, and fuel usage to increase across the agriculture industry and would set us back 20 years. Applicators would have to shut off sections by hand according to where they think they quit applying instead of having a GPS that tells you where you have applied and shuts off the machine on its own. My customers that strip till would no longer be able to use this method of farming because that level of accuracy would no longer be possible.

As far as rural wireless broadband goes, it would be nice to have high speed internet across the country, but not at the cost of GPS, which is critical to the agriculture economy and our countries economy. The tests conducted at the FCC's request by an industry Testing Working Group show conclusively that LightSquared's proposed service will be detrimental to GPS. Nearly all high accuracy GPS receivers will be rendered useless when anywhere near one of the proposed broadcast centers. If they want to cover rural America then this means many of these broadcast centers will have to be in the middle of some of the most productive farm ground across the country. Now that the tests have shown interference with GPS, the FCC shouldn't allow LightSquared to keep trying modified versions of its plan anywhere near the GPS L-Band. Also LightSquared's proposal that a filter on the GPS receivers could solve this problem is preposterous because no such filter even exists and would cost the end GPS users millions to add the filter or upgrade to filtered GPS units. These same filters would likely limit the accuracy of GPS. LightSquared's operations and GPS are fundamentally not compatible and the FCC should order LightSquared out of the L-Band.

The American heartland is one of the best growing sectors in the world, feeding millions of people around the world. American agriculture has come to rely on GPS to help us feed the world efficiently, and has enabled us to reduce fertilizer, chemical, and fuel usage across the industry, helping us reduce the environmental impact of farming. I will not give up GPS just to have better internet signal on my farm and neither will my customers. I ask that the FCC orders LightSquared out of the L-Band for terrestrial stations.

Thank you,

Brett Peelen

Precision Ag Specialist/Farmer/Rural Resident
NW Iowa